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Hoffman et al.

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(54) **MULTI-BARREL SYRINGE INJECTION SYSTEM**

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(57) **ABSTRACT**

An injection device for injecting a medicant into a plurality of tissue sites in a patient for a selected treatment is constructed and arranged such that the number of tissue sites is the total number for the selected treatment thereby requiring a single positioning step. The injection device includes a body having a syringe and a control linkage, the syringe including a plurality of barrels, and a cooperating plunger array including a plurality of plungers. Each barrel receives a corresponding plunger. The injection device further includes a plurality of injection needles connected to the syringe wherein one injection needle is connected to each barrel, a multi-lumen tip, a shaft connected to the multi-lumen tip and extending between said multi-lumen tip and said body. The control linkage is connected to each needle so as to move each needle between a deployed injection position and a retracted position.

30 Claims, 30 Drawing Sheets